

**METHOD AND APPARATUS FOR INTELLIGENT, SCALABLE
COMMUNICATIONS IN A MULTI-ASSET FINANCIAL FULFILLMENT
NETWORK**

Cross Reference to Related Applications

5 This application hereby incorporates U.S. Application No. 09/684,208, filed
October 6, 2000, by reference in its entirety. This application claims the benefit under
35 U.S.C. §119(e) of the filing date of U.S. Provisional Application No. 60/251,077, filed
December 4, 2000, which is hereby incorporated by reference in its entirety.

Field of the Invention

10 The present invention relates generally to a method and apparatus for providing
uniform, intelligent, and scalable communications between disparate entities on a multi-
asset, financial fulfillment network.

Description of Related Art

15 Computers in networks interconnecting disparate businesses, such as networks
including two or more computer systems that communicate with each other to perform
various functions such as loan processing and other financial transactions, typically do
not (or cannot be counted on to) communicate using a single, standard messaging
protocol, data format, or document format. As a result, the computer system of an entity,
such as a lending institution, may have to be specially configured to communicate with
20 each of potentially many different computer systems to send, receive, and appropriately
respond to information from other systems. For example, if a merchant wishes to submit
a loan application electronically to several different lenders using the merchant's
computer system, the merchant's computer system may have to be configured specially
to format or otherwise package the loan application information in a different way for
25 each lender's computer system to which the application is sent. In addition, the
merchant's computer system would have to incorporate the capability to interact with the
lender's remote computer system in order to fulfill requirements that are unique to a
particular lender in order to complete the credit application. Furthermore, these
interactions would have to be customized for each type of credit application, e.g., loan,
30 lease, etc., because of the disparate information requirements of these products. These

requirements may make it difficult for a merchant or other entity to access financial services and may discourage the merchant or other entity from even attempting to access the financial services of others using electronic means.

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Summary of the Invention

Illustrative embodiments of the invention provide a variety of different aspects that combine to provide a widespread and scalable electronic financial fulfillment network that may be accessed by a number of different computer systems. In one illustrative embodiment, communication between computer systems external to a financial fulfillment network and systems within the financial fulfillment network may be managed using a Financing Application Programming Interface (API). The financial fulfillment network, such as a financing system described in U.S. Patent Application No. 09/684,208, filed October 6, 2000 and titled "Method and Apparatus for Processing Financing Applications", may include a computer system or network of computer systems that operate financing service modules and communicate with external systems. That is, such a computer system may, for example, handle requests for financial services from the external systems and responses to the requests. The financing service modules may provide any suitable financing service, such as processing factoring transactions, trade credit transactions, leasing transactions, escrow transactions, credit insurance transactions, letter of credit transactions, credit card transactions, payment netting, funds transfer, aspects of any of them, and so on. As one example, a loan application processing module operating within the financial fulfillment network may automatically process a loan application submitted by an external computer system in a financial services request and send a decision to approve or decline the application back to the external computer system. The financing service modules may be operated on behalf of lending institutions or other entities that have authorized their financing service decisioning logic to be implemented within the financial fulfillment network.

In one aspect of the invention, a Financing API may be configured such that all communications between external computer systems and the financial fulfillment network are formatted based on a uniform set of messaging rules, i.e., the messaging protocol used between the communicating devices reflects a set of predefined message

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portions (or information packets (not to be confused with the use of the term “packet” in a networking sense; thus, an “information packet” may be transmitted in a non-packetized format or if in a packetized format, as one, more than one or less than one packet on a communications channel or network)), specialized to facilitate the clearing of the financing transactions and available to system users as a common interchange language. The message portions themselves are relatively insensitive to the sequence and/or combinations in which they are invoked, allowing for a multitude of behaviors on the part of disparate on-line users/applicants. For example, the message portions may be combined in a variety of different ways to form a variety of different messages, thereby allowing the Financing API to support a variety of different financial services.

Furthermore, in another aspect of the invention, the set of message portions that comprise the Financing API are collectively exhaustive, in that they uniquely define the allowable user cases, manifested by users of a variety of financial services transactions. Thus, even though different external computer systems may use different operating systems and/or different financing transaction applications (such as loan application decisioning applications), the external computer systems may all communicate with the financial fulfillment network and may communicate with each other through the financial fulfillment network. This ability to communicate in a uniform way with the financial fulfillment network, i.e., by using a same API, may allow an entity to access the financing services of the network itself as well as the financing services of other entities having external computer systems that communicate with the financial fulfillment network and potentially other financial networks.

In another aspect of the invention, a Financing API may be structured to allow functionality to be added to the financial fulfillment network, e.g., additional financing services, without requiring any change to the messages or message portions used by the Financing API, or at least without requiring substantial change to the messages or message portions. For example, if a new financing service is added to the financial fulfillment network, existing sets of messages or message portions in the API may be used to support the new financing service. In some cases, a new financing service may require one or more new messages or message portions to be added to those supported by the API, but in general the new financing service can be supported in large part by

existing messages and/or message portions or combinations of message portions in the API.

In another aspect of the invention, the Financing API has a hierarchical structure that is used to structure the content of communications regarding a financing service provided through the financial fulfillment network. For example, the hierarchy may include the top-down levels of (1) overall or high-level type of financing service requested (self-finance decisioning, financing by outside entities, etc.), (2) type of customer (consumer, business, etc.), (3) type of asset financed (equipment financing, trade financing, etc.), (4) type of credit products available (loan, lease, etc.), (5) sets and/or sequences of operations to be performed (i.e., communications operations needed to provide the financial service), (6) specific operations details, and (7) information packets to be used in the communications (e.g., specific variables or other pieces of information needed to provide the service). Thus, communications for each financing services transaction can be logically organized using a hierarchy to define the parameters of the financing services to be provided and structure the content of the messages used to provide the service. The hierarchical organization can make a more efficient use of messages or information packets supported by the API (e.g., by allowing customized sets of information packets to be used for a variety of different transactions through the use of different combinations and sequences of a relatively small set of standard information packets) and more easily allow the integration of new financing services into the financial fulfillment network (e.g., alterations may be made in the hierarchy without affecting the operations of previously supported financing services). For example, in one aspect of the invention, an item in a selected level in the hierarchy may define a unique set and/or sequence of items from one or more lower levels in the hierarchy, while items in the lower levels may depend on (i.e., may vary according to) items at levels higher than the selected level in the hierarchy.

In another aspect of the invention, the Financing API may allow for interactive communications to occur during a financial services transaction. This interactive capability may allow a financial service to be tailored to each particular application and reduce inefficiencies in obtaining financial services. For example, a remote loan processing system operating with the financial fulfillment network may be configured to

intelligently request the applicant to supply additional information beyond that provided in an initial loan application, and incorporate this additional information in making the ultimate credit decision connected with the application. Further, the remote loan processing system may also allow the applicant to interactively monitor the status of the decision associated with the application for credit, providing appropriate responses to ad-hoc user queries.

In an illustrative embodiment, a merchant may submit a loan application to a financial fulfillment network using the Financing API request format. The API request format may be structured, for example, so that the loan application information is provided in a uniform way using a set of organized information packets regardless of the entity or computer system submitting the information. Upon receiving the request from the merchant, the financial fulfillment network may process the request, e.g., submit the data associated with the loan application to a loan application decision process and respond with a decision that is relayed back to the applicant via appropriate Financing API messages. This method of seamless data transfer between possibly disparate computer systems, in which the data from the applicant's computer, via the Financing API request interface, is incorporated into a process automation system operating within the financial fulfillment network, allows for intelligent and scalable communication. Furthermore, the Financing API allows for internal rules-based engines to incorporate information received by the host system via the Financing APIs into the credit approval logic to approve or decline a loan application, and update internal data storage devices with the received information. In addition, the Financing API allows for the loan processing engine residing on the financial fulfillment network to interactively request additional information from the applicant, or from other systems (either third party, or internal) that contain relevant data with which to enhance the quality of the credit decision process. The rules associated with the credit decision process may be arbitrary, in that they are completely specified on the financial fulfillment network by the underwriters of the credit application, or they may include routing rules in which the information required for the credit decision is forwarded to a set of financial institutions that may underwrite the application via the Financing API. In addition to processing a financial services request entirely within the financial fulfillment network, other external

computer systems (e.g., computer systems operated by various financing institutions) may receive a services request, process it, and send a response back to the merchant through the financial fulfillment network using the Financing API. Thus, even though the merchant and the financing institutions may operate computer systems and/or applications that are quite different, the Financing API may allow the merchant to access the financing services of the financial fulfillment network and/or other entities having systems that communicate with the financial fulfillment network without requiring otherwise special communications formatting.

Although in the illustrative embodiment above the merchant submits a loan application, the financial fulfillment network and/or other external computer systems may be configured to handle any type of financing transaction including, but not limited to, a factoring transaction, a trade credit transaction, a leasing transaction, an escrow transaction, a credit insurance transaction, a letter of credit transaction, a cash transaction or any combination of these transactions, and other transactions as will occur to those skilled in the field of finance.

Use of the Financing API to communicate with a financial fulfillment network may provide benefits to operators of computer systems external to the financial fulfillment network since the external systems may operate using any suitable operating system, hardware, software, logic, or other components and still be able to obtain and provide financing services through the financial fulfillment network. So long as the external computer system can send and receive communications with the financial fulfillment network, the external computer system can communicate with any other system linked to the financial fulfillment network as well as the network itself. In addition, financing service features may be added or changed in the external computer systems without requiring any change in the API. Thus, an operator of an external computer system may receive and provide different financing services without requiring any change in the API, or may enhance the offering of different financing services by adding to the set of messages defined in the Financing API. Use of the Financing API with the financial fulfillment network also makes the types and/or number of financing services that are available through the network scalable since both the systems in the financial fulfillment network and external systems may add and/or change the financing

services provided without any fundamental change in the API being required. For example, a financing institution may initially provide only loan application decisioning services through the financial fulfillment network. As time passes, the institution may add other services, such as factoring services, that are provided through the network.

5 Since the API may support the added services, the institution may need only to add support for messages in the API that are unique to the added services and components, (e.g., hardware, software, etc.) to its computer system and design the added components to be compatible with the API. Further, even if a financing service is added to the financial fulfillment network that requires a change to the API, the API may be relatively
10 easily changed and the altered API used by systems communicating with the financial fulfillment network.

Brief Description of the Drawings

Aspects of the invention will be appreciated more fully with reference to the following detailed description of illustrative embodiments, when taken in conjunction
15 with the accompanying drawings, wherein like reference characters denote like features, in which:

Fig. 1 is a schematic block diagram of a computer system incorporating aspects of the invention;

Fig. 2 is a flow chart of steps of a method for communication in accordance with
20 an aspect of the invention;

Fig. 3 shows an illustrative hierarchy for a communications interface in accordance with an aspect of the invention;

Fig. 4 shows an illustrative set of values for levels in the Fig. 3 hierarchy;

Fig. 5 shows an illustrative correspondence between operations and information
25 packets in an illustrative embodiment;

Fig. 6 shows an illustrative implementation of a transaction in an illustrative embodiment; and

Figs. 7 and 8 show a correspondence between combination information packets and simple information packets in an illustrative embodiment.

Detailed Description

Fig. 1 is a schematic block diagram of an illustrative embodiment that incorporates several aspects of the invention. In this illustrative embodiment, an applicant system 1 accesses financing services offered in connection with a financing network 2 and/or a lender system 3. It should be understood that the illustrative embodiment shown in Fig. 1 is only one example of an arrangement that may incorporate aspects of the invention. For example, any suitable number of applicant systems 1, financing networks 2, and lender systems 3 may be included. Further, the applicant system 1, the financing network 2 and/or the lender system 3 may include any suitable components or functions not described herein whether or not they are related to the operation of any of the systems in accordance with various aspects of the invention.

The applicant system 1, financing network 2 and lender system 3 may be general purpose data processing systems, such as a suitably programmed general purpose computer, or network of general purpose computers, and other associated devices, including communication devices and/or other circuitry or components necessary to perform desired input/output or other functions. The applicant system 1, financing network 2, and lender system 3 can also be implemented, at least in part, as a single special purpose integrated circuit (e.g., an application-specific integrated circuit - ASIC), or an array of ASICs, each having a main or central processor section for overall, system level control and separate sections dedicated to performing various different specific computations, functions and other processes under the control of the central processor section. The applicant system 1, financing network 2, and lender system 3 can also be implemented using a plurality of separate, dedicated programmable integrated or other electronic circuits or devices, e.g., hard-wired electronic or logic circuits, such as discrete element circuits or programmable logic devices. These systems 1, 2, and 3 may also include any other suitable devices, such as one or more information display devices (e.g., a computer monitors or printers), user input devices, such as keyboards, user pointing devices, touch screens or other user interfaces, data storage devices, such as a volatile or non-volatile memory, communication devices or other electronic circuitry or components.

The applicant system 1, financing network 2 and lender system 3 may communicate using a communications link 4. The communications link 4 may include any type of communication system, such as wired or wireless telecommunications networks, radio or infrared communications systems, the Internet, one or more wide-area or local-area networks, optical communications networks, combinations of any of them, and the like. In addition, communications may take place using any suitable format, protocol or other scheme to transmit information through the communications link 4.

In this illustrative embodiment, the applicant system 1 includes at least a processing module 11, an applications programming interface (API) module 12 and a memory 13. The financing network 2 and the lender system 3 similarly include at least a processing module 21 or 31, an API module 22 or 32 and a memory 23 or 33. The processing modules 11, 21 and 31 may be configured in any suitable way and may be similar to, or different from, each other. Likewise, the API modules 12, 22 and 32 may be configured in any suitable way. The processing modules 11, 21 and 31 and the API modules 12, 22 and 32 may be implemented, at least in part, as software modules written in any suitable programming language that are executed on any suitable data processing apparatus in any suitable environment. Alternately, or in combination with the software modules, the processing modules 11, 21 and 31 and the API modules 12, 22 and 32 may be implemented as hard-wired electronic circuits or other programmed integrated or other electronic circuits or devices. The memories 13, 23 and 33 may include any suitable data storage devices, such as magnetic disk or tape storage devices, volatile or non-volatile semiconductor devices, optical disk storage devices, etc.

Using the API modules, the systems may communicate with each other in a way that is independent of the other functions, operating systems or capabilities of the systems. As discussed above, the API modules can structure the content of messages sent between the systems based on a defined purpose for the communications using a set of information packets known to each of the API modules. That is, information that is to be sent between the systems 1, 2 and/or 3 may be associated with one or more appropriate information packets that are then assembled into a message and sent. (As discussed above, the term "information packet" does not refer to packetized transmission protocols. Instead, "information packet" refers to predefined message portions that may

be used to structure a message as described in more detail below. Messages generated using “information packets” may be sent by packetized transmission protocols, or not, as the transmission protocol used is not important to this aspect of the invention.) The message may include a header information packet that includes information indicating the defined purpose for communication. The system receiving the message may use the communication purpose information to determine which information packets are included in the message and use the information associated with the information packets for any suitable purpose.

As a brief example described in more detail below, a user of the applicant system 1 may use the system 1 to send a message regarding a loan application to the financing network 2. The user may indicate a purpose for communication, e.g., “loan application”, to the system 1 and then provide information to be sent in a message to the financing network 2. The API module 12 may identify, e.g., select based on a purpose for communication, a set of information packets to be used when constructing the message based on the defined communication purpose “loan application”, and assign information for the message to the appropriate information packets. Once the information to be sent has been properly associated with the information packets to be used to structure the message, the message can be sent to the financing network 2. Since the financing network 2 receiving the message can identify the communication purpose for the message, e.g., from the header information packet, the financing network 2 can determine which information packets are included in the message and retrieve needed information from appropriate information packets or variables.

Fig. 2 is a flow chart of steps that may be performed, for example, by any of the applicant system 1, financing network 2 and/or lender system 3 when communicating.

Although the illustrative embodiment shown in Fig. 1 is used to help explain the steps in the Fig. 2 flow chart, it should be understood that the steps of this method need not be performed only on a system like that in Fig. 1. Instead, aspects of the invention may be implemented in any suitable environment, system or set of systems.

In step S10, definitions for information packets are provided. The definitions for information packets may be provided in any suitable way, including storing definitions in the memories 13, 23 or 32, sending definitions for information packets from one system

to another, e.g., from the financing network 2 to the applicant system 1, or in other manners. In one example used herein to explain an illustrative embodiment, information packet definitions are stored in the memories 13, 23 and 33.

The definitions for the information packets may define a set of variables that are associated with each information packet. For example, definitions may be provided for information packets related to a consumer or business address, asset information, a credit bureau report, consumer or business financial information, a credit reference, employment information, equipment information, a list of alternate identification information for a consumer or business, and others. Any suitable variables, or fields, may be associated with an information packet, e.g., an information packet for a consumer address may be associated with variables for a street, city, ZIP code, country, and phone number. An exemplary set of information packet definitions is provided in Table 1 below and in the incorporated U.S. Provisional Application 60/251,077 in sections 6.3 of Documents 1, 2 and 3. An information packet may have one or more variables associated with it, and the variables may have any suitable type, such as number, string, integer, character, a number range, a flag, and so on. Information packets may also reference other information packets in some cases, e.g., an information packet for consumer financial information may be associated with a number of variables as well as an information packet for consumer address information.

In step S20, a purpose for communication between devices in a financing services network is defined. The purpose for communication may be defined in any suitable way. For example, a user of the applicant system 1 may indicate a purpose for communication by inputting information through an input/output (I/O) device, such as a voice recognition system, keyboard, touch screen, a graphical user interface, etc. The information representing the purpose for communication may be input in response to prompting by the applicant system 1, e.g., the applicant system 1 may request the user to indicate whether communications with a financing network 2 are for a loan application or a line of credit. Thus, the purpose for communication may be defined by a single value, representing, for example, "loan application", "syndication", "letter of credit", etc., or by a plurality of values. For example, a hierarchy of values may be used to define the purpose for communication. As discussed above, a first level in the hierarchy may define

a financing service to be accessed, a second level may define the type of customer accessing the service, a third level may define the financing option selected for the transaction, and so on. The user may provide information to define the communication purpose in any suitable way, such as by selecting a particular Internet website page (e.g.,
5 where each of a plurality of different pages are associated with different communication purposes), by entering information into appropriate areas of a graphical user interface, by selecting a set of values displayed in a graphical user interface, and so on. In another embodiment, the applicant system 1 may extract information from data provided by the user, e.g., in a loan application form, to determine the communication purpose.

10 Alternately, a purpose for communication may be defined by a communication signal received at any of the systems from another system. For example, the lender system 3 may receive a signal from the financing network 2 that indicates a purpose for communication. The signal may explicitly define one or more parameters that indicate the purpose for communication, or the system receiving the signal may determine the
15 purpose for communication from attributes of a received message, e.g., a received message that includes a loan application may itself represent a purpose for the communication is "loan application".

In step S30, a set of one or more information packets that are to be used to structure the content of a message sent between the devices is determined. The set of
20 information packets used to structure the content of the message may be determined based on the purpose of communications defined in step S20. Thus, for example, communications relating to a loan application may be structured using a first set of information packets and communications relating to a line of credit transaction may be structured using a second, different set of information packets. If a plurality of
25 parameters is used to define the purpose for communication, the set of information packets used for structuring the content of messages may be selected based on the set of parameters. Since the set of information packets may be determined based on the purpose for a communication, devices receiving messages that participate in communications having a defined purpose can anticipate and/or readily parse information
30 received in a message. This is because the information packets may be drawn from a set of standard information packets, both the set and the structure of each available

information packet type being known to the device receiving a message, and each of a plurality of communication purposes may be associated with known sets of information packets as meaningful information. As such, data can be extracted from the information packets in a message and used in proper context.

5 Each message sent between devices may also include an information packet that includes header information. The API header information packet may include variables associated with information for the sender's identification, a timestamp, a transaction identifier, a return address, as well as values that define the purpose for communication, such as values for different levels in a hierarchy. This header information packet can be
10 used by a receiving device to identify what the purpose for communication is, who sent the message, when and where the message was sent, and so on.

 In step S40, a value for at least one variable for at least one information packet in the message is defined. As discussed above, variables associated with an information packet may take any suitable form and may be associated with string-type information,
15 numeric information, etc. Values may be provided in any suitable way for the variables. For example, a user may enter values by keyboard or other user interface, e.g., when completing a loan application form on the applicant system 1. Values may also be obtained from other information sources, such as previously sent messages, a database, such as a consumer credit information bureau, and so on. Thus, a user need not provide
20 all of the information used to define values for variables associated with an information packet.

 In step S50, the message is sent, e.g., from one device to another in a financing services network. The message need not be sent directly between devices, and instead may be sent, for example, from an applicant system 1 to a financing network 2, which
25 then forwards the message, or a similar message to the lender system 3. As discussed above, the message may be sent in any suitable way using any suitable protocol and/or communication channel. For example, the message may be sent through a telecommunications network, the Internet, a local area or wide area network, whether wired or wireless, or any suitable combination of such systems.

30 To further illustrate several aspects of the invention, an illustrative embodiment is described below in which the Fig. 1 system is used to communicate regarding a financing

transaction. In this embodiment, the API modules 12, 22, 32 use a 7-level hierarchy shown in Fig. 3 to define a purpose for communication. Level I in the hierarchy is an overall financing service to be accessed by a user of the applicant system 1, which may include a transaction clearing service (such as a loan application decisioning service, syndication service, etc.), authentication services (such as a service to verify the true identity of a particular consumer or business or to detect credit or other fraud), or payment services (such as credit card or other debt payment services). In this illustrative embodiment, the user accesses a graphical user interface (GUI) that presents value options for Level I that the user selects. By selecting a value for levels in the hierarchy, the user can define a purpose for communication. Fig. 4 shows values selected by/for the user in this illustrative embodiment. For this transaction, the user has selected the value “Transaction Clearing Service” for Level I in the hierarchy. Values selected in certain levels in the hierarchy may affect the possible values that may be selected or otherwise defined for other levels. For example, certain options may not be available to certain types of customers or for certain types of financing services. Thus, if the user selects values from a graphical user interface to define a purpose for communication, the selectable values displayed by the graphical user interface for other levels may be adjusted based on one or more defined values in the hierarchy.

Level II in this example relates to the type of customer accessing the financing service, such as a consumer or business type customer. The customer types in this level may be further broken down into customer types in addition to the business and consumer types. For example, the business type may be broken down into small, medium and large business sizes, etc. Such further breakdowns for items in various levels of the hierarchy may be made within the level itself, or in other sublevels. For example, Level II may provide for the types “consumer” and “business”, and a sublevel IIA may be provided for the customer subtypes of small, medium and large businesses. This general notion applies to all levels in the hierarchy, not just Level II in this specific example. In Fig. 4, the user has selected the value “Consumer” for Level II in this transaction.

Level III in this example relates to financing options for the customer. Such options may include trade financing, working capital financing, equipment financing and

other financing options. Financing options that involve a form of lending may include secured and/or unsecured forms of lending. In Fig. 4, the user has selected the value “Trade Financing” for Level III.

Level IV of the hierarchy includes items related to particular financing products that are available to the customer. As with any of the other levels in the hierarchy, items in Level IV of the hierarchy may be dependent upon values in other levels in the hierarchy. For example, particular financing products may be available to business type customers (Level II), but not to consumer type customers. Similarly, the types of available financing products may depend upon a selected financing option from Level III. In this illustrative embodiment, available financing products may include single payment loans, term loans, installment loans, revolving loans, a line of credit, letter of credit, and so on. In the example shown in Fig. 4, the user has selected the value “Term Loan” for Level IV.

The hierarchy also includes Levels V, VI and VII. These levels in the hierarchy define transactions (Level V) that are to be performed based on values for at least one of Levels I-IV, operations (Level VI) that are performed for each transaction, and information packets (Level VII) that are used in performing the transactions and operations. In this illustrative embodiment, the user does not select, adjust or otherwise directly define values for Levels V-VII, although it may be possible for the user to define values for Levels V-VII. Instead, these values are defined by the API module 12, 22 or 32. Any one of Levels V, VI and VII may depend upon other levels in the hierarchy. For example, in this illustrative embodiment, the transactions level in the hierarchy depends upon values in Levels I-IV, the operations level depends upon the transactions level, and the information packets level depends upon Levels II-IV and VI in the hierarchy.

Values for the Levels I-IV in the example shown in Fig. 4 require the transaction *NewCredit* (Level V) to be implemented. In this example, the transaction *NewCredit* requires the operations *LookupBusinesses*, *ReturnBusinesses*, *GetApplicationForm*, *ReturnApplicationForm*, *SubmitApplication*, *ReturnApplicationReference*, *GetDecisionStatus*, *ReturnDecisionStatus*, and *SubmitInfo*. Since the operations level items depend upon the transactions level (Level V), a given transaction, such as

NewCredit, will always require the same set of operations. Thus, it is possible for other value sets for Levels I-IV of the hierarchy to require the transaction *NewCredit* to be implemented. In this example, other value sets that require the transaction *NewCredit* will always require the same set of operations. However, it will be understood that dependencies in this illustrative embodiment may be altered in any suitable way.

The information packets needed to implement the transaction *NewCredit* are also listed in Fig. 4. In this example, the items at the information packets level (Level VII) depend upon at least one upper level in the hierarchy, such as Levels II-V. For example, different information packets may be used to implement the transaction *NewCredit* and its associated operations depending on whether the customer is a *Consumer* or *Business* customer as indicated in Level II in the hierarchy. Similarly, a different set of information packets may be used to implement the transaction *NewCredit* depending upon values for other levels in the hierarchy, such as Levels III and IV.

Fig. 5 shows an exemplary correspondence between the information packets used and each operation executed to implement the *NewCredit* transaction in this embodiment. For example, the *LookupBusinesses* operation requires the information packet <lookup-business-criteria>, and so on. Thus, this correspondence shows which information packets will be used when performing each corresponding operation in the transaction *NewCredit*. Several of the information packets listed in Fig. 5 as corresponding to a particular operation are actually combination information packets that refer to two or more information packets. This shorthand form is not required and is used to simplify the presentation in Fig. 5 by eliminating the need to include a list of several information packets for each operation. Figs. 7 and 8 provide a complete list of information packets that relate to each combination information packet in this illustrative embodiment. Further information regarding the fields, or variables, that may be associated with each information packet in this illustrative embodiment are provided in the incorporated U.S. Provisional Application Serial No. 60/251,077, e.g., in section 6.3 of Documents 1-3 in the provisional application.

Fig. 6 shows a set of messages that are sent between an applicant system 1, financing network 2 and a lender system 3 in an illustrative embodiment when executing the transaction *NewCredit*. The set of messages sent as shown in Fig. 6 occurs after a

purpose for communication has been defined, e.g., by the user entering values for one or more levels in Levels I-IV of the hierarchy shown in Fig. 3. As discussed above, a user at the applicant system 1 may define the purpose for communication, for example, by selecting values in a graphical user interface for different levels in the hierarchy. The purpose for communication in this example is that shown in Fig. 4. The purpose for communication may be represented by values from Levels I-VI in the hierarchy that are included in message header information packets. Once the purpose for communication is defined, the API module 21 may identify the transaction(s), operation(s) and information packet(s) to be used to structure messages sent when performing the transaction. Thus, in a first communication (Communication A) in implementing the transaction *NewCredit* as shown in Fig. 6, a *LookupBusinesses* operation is performed. In general, each operation included in this illustrative embodiment involves sending a single message, but operations may include sending/receiving two or more messages and/or other functions. In this example, the *LookupBusinesses* operation involves sending a message from the applicant system 1 to the financing network 2 including the corresponding information packet <lookup-business-criteria> as well as an API header information packet. This message set may be used to request the financing network 2 to search a database for information related to the consumer requesting the financing services. For example, the consumer may be an individual wishing to purchase a good or service from a merchant that maintains the applicant system 1. Merchant personnel may use the *LookupBusinesses* operation to request the financing network 2 to retrieve stored information related to the consumer. The financing network 2 implements the *ReturnBusinesses* operation and sends back a message (Communication B) that includes information identified in the search requested in the *LookupBusinesses* operation. As with the other messages sent when implementing an operation, the information contained in the message is structured using the information packets associated with the operation being performed. The message may include no information, e.g., if the financing network 2 did not find any records meeting the search criteria, or a list of one or more records that met the search criteria.

A user at the applicant system 1 may use information in the message sent from the financing network 2 to carry the transaction forward, e.g., select a record provided in

the *ReturnBusinesses* message that relates to the consumer and use the information in the record to complete an application form. Alternately, if the *ReturnBusinesses* message did not include any information related to the consumer, or if the *LookupBusinesses* message was never sent (e.g., in the case that the user knows that the financing network 2 does not include any information related to the consumer), the message (Communication C) sent when implementing the *GetApplicationForm* operation may request a blank application form related to the requested financing service. The message may include an indication of which information sent with the *ReturnBusinesses* message relates to the applicant. The financing network 2 may send back the *ReturnApplicationForm* message (Communication D) that includes the blank application form. Not necessarily all of the fields in the blank application form may be empty. Instead, any suitable number of the fields may be filled in by the financing network 2 using appropriate information, such as information identified in the *GetApplicationForm* message as relating to the applicant, and so on, before sending the form to the application system 1.

After receiving the application form, the user may provide information to complete the application, e.g., by typing information into appropriate areas of a graphical user interface. Once the application form is complete, the *SubmitApplication* message (Communication E) may be sent to the financing network 2. The *ReturnApplicationReference* message (Communication F) may be sent back to the applicant system 1 to acknowledge receipt of the application and possibly indicating other information, such as reference information for the application, such as an application number.

The financing network 2 may also send a *SubmitApplication* message (Communication G) to one or more lender systems 3, thereby submitting the application to one or more lenders for consideration. This *SubmitApplication* message may have the same structure as the *SubmitApplication* message received from the applicant system 1. This capability allows the application to easily be sent to multiple lender systems 3 if desired, since no special processing is required for each message sent to a lender. The lender system 3 may return a *ReturnDecisionStatus* message (Communication H) acknowledging the application submission and communicating the lender system 3's current status, e.g., currently processing application. As needed, the lender system 3 may

send additional *ReturnDecisionStatus* messages (Communication I) to the financing network 2, for example, to request additional information such as a personal guarantor for the applicant requesting the loan. The financing network 2 may acknowledge the message, e.g., by sending the *Acknowledge* message (Communication J).

5 At any point in the process, the applicant system 1 may send a *GetDecisionStatus* message (Communication K) to the financing network 2 to check on the current status of the loan application for a plurality of lenders. The financing network 2 may return a *ReturnDecisionStatus* message (Communication L) that includes any suitable information, such as a status last reported by the lender system 3, an information request, such as the personal guarantor (PG) request sent in Communication I, and so on. In response to a *ReturnDecisionStatus* message that requests further information, the applicant system 1 may send a *SubmitInfo* message (Communication M) that includes the requested information. The financing network 2 may acknowledge receipt of the *SubmitInfo* message and forward the *SubmitInfo* message (Communication N) to the appropriate lender system 3. This type of interactive communication capability is a unique aspect of this illustrative embodiment. Thus, a lender system 3 need not simply reject an application, but instead may request further information, such as an adjustment in loan terms, guarantor information, and so on to allow approval of the application.

10 Once the application is approved, a *ReturnDecisionStatus* message (Communication Q) may be sent from the lender system 3 to the financing network 2, which may acknowledge receipt of the message (Communication R) and forward it (Communication T) to the applicant system 1 either on its own or in response to a *GetDecisionStatus* message (Communication S) sent by the applicant system 1 to the financing network 2. The customer may accept the lender's approval in a *SubmitInfo* message (Communication U) sent to the financing network 2, which may forward the *SubmitInfo* message (Communication V) to the lender system 3. The lender system 3 may acknowledge the transaction is complete with a *ReturnDecisionStatus* message (Communication Y) that may be acknowledged by the financing network 2 and forwarded to the applicant system 1 (Communication Z).

15 It should be understood that the above description is only one illustrative example for one transaction that may be executed by the illustrative embodiment. It should be

understood that various aspects of the invention should in no way be limited to this or other examples provided herein.

Although particular embodiments of the invention are described in detail, various modifications and improvements will readily occur to those skilled in the art. Such modifications and improvements are intended to be part of this disclosure and within the spirit and scope of the invention. Accordingly, the description of the illustrative embodiments is by way of example only and the invention is defined, at least in part, by the following claims and their equivalents.

Table 1

<acknowledgement>

An information packet that contains a response acknowledgement plus any completion codes

Field	Description	Domain	Req	Validation
Sender Id	eCredit.com assigned id for the sender of the request or notify message	Char 10	Y	
Event Id	Unique id for the request or notify message.	Char 10	Y	
Completion Code	Level of error	Char 10	Y	Completion Code list
Message	Completion message text	Char 100	N	

<address>

Field	Description	Domain	Req	Validation
Address 1	The first address line	Char 30	Y	
Address 2	Additional address line	Char 30	N	
City		Char 30	Y	State Abbreviation list
State/Province		Char 10	Y	
Zip/Postal Code		Char 10	Y	Country list
Country	Country	Char 30	Y	
Phone	Phone number	Char 13	N	Required for <business-address>

Phone Extension	Char 13	N
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<api-header>

This is the standard information packet for all API messages.

Field Name	Description	Domain	Req	Validation
API Version	API version for this message	Char 2	Y	"2" for V3.1
Sender Id	eCredit.com assigned id for the sender of this message	Char 10	Y	
Event Id	Unique id for this message.	Char 10	Y	Unique Id provided by the Sender
Event Submission Timestamp	The local date and time that the sender submitted this message	Char 20	Y	Format: "yyyymmdd hh:mm:ss"
Event Time Zone	The time zone where this message is submitted expressed as the time difference from Coordinated Universal Time (UTC).	Char 6	Y	±HH:MM. EST="-05:00", CST="-06:00", MST="-07:00", PST="-08:00". This should be adjusted for Daylight Savings Time where applicable.
GFN Site Id	The GFN site where this application is being processed.	Char 10	N	
Return IP Address	Return address of the site where this message originated. This could be an IP address or a URL.	Char 255	N	Format: "xxx.xxx.xxx.xxx" for a return IP address.
Service Type	eCredit.com code for this type of service	Char 30	Y	Service list
Customer Type	eCredit.com code for this type of customer	Char 30	Y	Customer list
Form Factor	eCredit.com code for this form factor	Char 30	Y	Form Factor list
Facility	eCredit.com code for this facility type	Char 30	Y	Facility list
Transaction	eCredit.com code for this transaction	Char 30	Y	Transaction list
Operation	eCredit.com code for this operation	Char 30	Y	Operation list
Merchant Id	eCredit.com assigned id for the merchant	Char 60	Y	Valid merchant Id
Lender Id	eCredit.com assigned id for the lender	Char 60	N	Valid lender Id

Field Name	Description	Domain	Req	Validation
Application Number	An id for this application that is unique to the merchant.	Char 60	N	

<application-info>

Field	Description	Domain	Req	Validation
Approved Name	Name of customer approved by the lender	Char 30	Y	
Status	eCredit.com-specific Status notification	Char 20	Y	Decision Status list
Decision	eCredit.com-specific Decision Code	Char 20	Y	Decision list
Decision State	eCredit.com-specific Decision State	Char 30	Y	Decision State list

<application-reference>

Provides a reference to the specific application that may be used to get a decision status or populate an application form.

Field	Description	Domain	Req	Validation
Merchant Id	eCredit.com assigned id for the merchant	Char 10	Y	Valid merchant Id
Application Number	An unique id provided by the merchant for this application.	Char 10	Y	

5 <approved-values>

<approved-*> information packets are only provided when the Decision is "Approved".

Field	Description	Domain	Req	Validation
Submitted Name	Name of customer as provided by the merchant	Char 30	Y	
Approved Name	Name of customer approved by the lender	Char 30	Y	
Approved Address	Address of customer approved by the lender	Char 30	Y	
Approved City		Char 30	Y	
Approved State		Char 10	Y	
Approved Zip		Char 10	N	
Approved Credit Line	Amount of the credit line approved by the lender	Numeric	N	
Approved Credit Line Expiry	Date this credit line will lapse if not used.	Char 20	N	Format: "yyyymmdd hh:mm:ss"

Field	Description	Domain	Req	Validation
Authorized Amount	Approved authorization amount	Numeric	N	Required if Authorization Code is provided
Authorization Code	The authorization code from the lender for the approved loan	Char 20	N	Required if Authorized Amount is provided
Terms Conditions Text	The text of the terms and conditions for this credit line	Char 8191	N	

<asset-info>

Field	Description	Domain	Req	Validation
Asset Type	Type of asset	Char 50	Y	
Asset Manufacturer	The manufacturer of the asset	Char 50	Y	
Asset Description	Description of Asset to be financed	Char 50	N	
Asset Model Num	The model number of the asset	Char 50	Y	
Asset Serial Num	The serial number of the asset	Char 50	Y	
Asset Condition	Condition of Asset	Char 20	Y	Asset Condition list
Asset Quantity	Number of units	Numeric	Y	
Asset Cost	Material cost of asset	Numeric	Y	
Asset Tax	Sales tax cost of asset	Numeric	N	
Asset S&H	Shipping and handling cost of asset	Numeric	N	
Asset Other Cost	Other costs of asset	Numeric	N	
Address 1	The first address line of the asset shipping address	Char 30	N	
Address 2	Additional address line	Char 30	N	
City		Char 30	N	
State/Province		Char 10	N	State Abbreviation list
Zip/Postal Code		Char 10	N	
Country	Country of the asset shipping	Char 30	N	Country list
Phone	Phone number	Char 13	N	
Phone Extension		Char 13	N	

<bank-reference>

Field	Description	Domain	Req	Validation
Bank Ref Name	Name of the bank reference	Char 30	Y	
Bank Ref Officer First Name	First name of the officer at the bank	Char 30	Y	
Bank Ref Officer Last Name	Last name of the officer at the bank	Char 30	Y	
Bank Ref Phone	Phone number for the bank officer	Char 13	Y	
Bank Ref Phone Extension		Char 13	N	
Bank Ref Date Opened	Date the account was opened	Char 8	Y	yyyymmdd
Bank Ref Acct Name	Names on the account at bank reference	Char 30	Y	
Bank Ref Acct Type	Type of account	Char 30	Y	Bank Account Type list
Bank Ref Acct Number	Account number at bank reference	Char 20	Y	
Bank Ref Acct Balance	Current balance for the account	Char 20	N	

<bureau-report>

Field	Description	Domain	Req	Validation
Bureau Report Text	The text of the requested bureau report	Char 4095	Y	

<bureau-report-reference>

Field	Description	Domain	Req	Validation
Bureau Code	Code name for this bureau	Char 30	Y	Bureau list
Bureau Event Id	GFN-generated unique id for this bureau request.	Char 30	Y	
Bureau Event Submission Datetime	The local date and time of the bureau request	Char 20	Y	Format: “yyyymmdd hh:mm:ss”

<business-contact-info>

- 5 Information about an individual contact at the Business.

Field	Description	Domain	Req	Validation
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Contact Last name	Name of contact at the customer site	Char 30	Y	
Contact First Name		Char 30	Y	
Contact Phone	Phone number of customer contact	Char 13	Y	
Contact Phone Extension		Char 13	N	
Contact Fax	Fax number of customer contact	Char 13	N	
Contact Email	Email for the customer contact	Char 40	N	

<business-financials>

Financial information about the business

Field	Description	Domain	Req	Validation
Annual Revenue	Annual revenue for this applicant	Numeri c	Y	
Business Net Worth	The current net worth of this business	Numeri c	Y	
Checking Balance	The current balance in the business checking account	Numeri c	Y	

<business-guarantor-info>

Field	Description	Domain	Req	Validation
Business Relationship	Type of relationship between the guarantor and the business applicant	Char 30	Y	Business Relationship list
Percent Ownership	Percentage of ownership in the company	Numeri c	N	
Amount Limit	Maximum amount this guarantor is willing to guarantee		N	

<business-info>

Field	Description	Domain	Req	Validation
Legal Name	Name of the business customer of merchant	Char 50	Y	
DBA Name	Doing business as name	Char 50	N	
Business Tax Id	The federal tax id for this business	Char 20	N	
Business Ticker	Ticker symbol for this business	Char 20	N	
Business Legal Entity Type	Type of business such as corporation, partnership, proprietorship	Char 40	Y	Legal Entity Type list

Business Industry Type	Type of industry	Char 40	N	Industry Type list
Applicant Duns No	Dun and Bradstreet number for this customer, if known	Char 9	N	
Business Start Year	Year that the business started	Char 4	Y	"YYYY"

<consumer-financials>

Field	Description	Domain	Req	Validation
Net Worth	Personal net worth of the owner/consumer	Numeri c	N	
Annual Income	Annual income of the owner/consumer	Numeri c	Y	
Other Income	Any other income earned by the consumer	Numeri c	N	Required if OtherIncomeSource is provided
Other Income Source	Source of the other income earned by the applicant	Char 30	N	Required if Other Income is provided
Monthly Housing Payment	Monthly housing payment	Numeri c	Y	
Residence Type	Type of residence (owner, renter, etc.)	Char 20	Y	Residence Type list
Resident Since	Year the consumer moved into the current residence	Char 4	N	

<consumer-info>

Field	Description	Domain	Req	Validation
Salutation		Char 20	N	Salutation list
First name	Given name of consumer	Char 30	Y	
Middle Initial	Middle initial	Char 5	N	
Last name	Surname of the consumer	Char 30	Y	
Name suffix	The generation name of the consumer	Char 10	N	Name Suffix list
Month of Birth	Month of the date of birth for the consumer	Char 8	Y	Format: “MM”
Day of Birth	Day of the date of birth for the consumer	Char 8	Y	Format: “DD”
Year of Birth	Year of the date of birth for the consumer	Char 8	Y	Format: “YYYY”
SSN	Social security number of consumer	Char 9	Y	
Personal Id Type	Type of personal id presented	Char 20	N	Personal Id Type list

Personal Id Issuer	Name of issuer for the personal Id	Char 30	N	
Personal Id Number	Number from the identification document	Char 30	N	
Bureau Authorization Flag	If Yes, the consumer has granted the lender authorization access bureau data	Char 2	Y	Must be "Y" or "N"
Email	Email for the consumer	Char 40	N	

<credit-line-info>

Field	Description	Domain	Req	Validation
Lender Name	Name of lender approving the credit line	Char 60	Y	
Credit Line	Amount of the credit line approved by the lender	Numeric	Y	
Credit Line Expiry	Date this credit line will lapse if not used.	Char 20	Y	Format: "yyyymmdd hh:mm:ss"
Credit Available	Amount available in the credit line	Numeric	Y	
Annual Percentage Rate	The APR for this lease or loan	Numeric	Y	

<credit-line-reference>

Provides a reference to the specific application that may be used to get a decision status or populate an application form.

Field	Description	Domain	Req	Validation
Lender Id	eCredit.com assigned id for the lender	Char 10	Y	Valid lender Id
Lender Account Number	Lender assigned id for the customer	Char 10	Y	

5 **<credit-reference>**

This may be used for either credit reference or trade reference.

Field	Description	Domain	Req	Validation
Credit Ref Name	Name of the credit reference	Char 30	Y	
Credit Ref Contact First Name	Contact first name for the credit reference	Char 30	Y	

Credit Ref Contact Last Name	Contact last name for the credit reference	Char 30	Y	
Credit Ref Phone	Phone number of the credit reference contact	Char 13	Y	
Credit Ref Phone Extension		Char 13	N	
Credit Ref Acct Num	Account number for the credit reference, if applicable	Char 20	N	

<credit-request>

Information about the specific financial details for this credit application

Field	Description	Domain	Req	Validation
Amount Requested	Credit line requested by the customer.	Numeri c	Y	
Term	Lease or loan term requested for this application, in months	Numeri c	N	Default: 36

<customer-reference>

- 5 Provides a reference to the specific customer that may be used to populate a new credit application form.

Field	Description	Domain	Req	Validation
Customer Number	An unique id provided by eCredit.com for this customer.	Char 10	Y	

<decision-response>

Field	Description	Domain	Req	Validation
Lender Id	eCredit.com assigned id for the lender	Char 60	Y	Valid lender Id
Lender Application Number	Lender assigned id for this credit application	Char 30	Y	
Customer Reply	The customer's reply to a returned lender decision status	Char 30	N	Customer Reply list

<document-reference>

This information packet represents a handle to a lender-generated document.

Field	Description	Domain	Req	Validation
Document Id	Unique Id number for this	Char	Y	

	document	100	
Document	Identifying string to display to	Char	Y
Title	the user	100	

<employment-info>

Field	Description	Domain	Req	Validation
Employee Work Phone	The work phone number of the applicant	Char 13	Y	Including area code, with no separators.
Employee Work Phone Extension		Char 13	N	
Employer Name	The name of the applicant's employer	Char 20	Y	
Employee Year employment started	The year that the applicant started working for this employer	Char 4	Y	Integer format: YYYY
Employee Job Title	Job title of the employee	Char 20	Y	Job Title list

<equipment-info>

Field	Description	Domain	Req	Validation
Equipment Description	Description of equipment to be financed	Char 50	Y	
Equipment Cost	Total cost of the equipment	Numeric	Y	
Equipment Tax	Sales tax cost of equipment	Numeric	N	
Equipment S&H	Shipping and handling cost of equipment	Numeric	N	
Equipment Other Cost	Other costs of equipment	Numeric	N	
Address 1	The first address line of the equipment shipping address	Char 30	N	
Address 2	Additional address line	Char 30	N	
City		Char 30	N	
State/Province		Char 10	N	State Abbreviation list
Zip/Postal Code		Char 10	N	
Country	Country of the equipment shipping	Char 30	N	Country list
Phone	Phone number	Char 13	N	
Phone Extension		Char 13	N	

<equipment-misc>

Field	Description	Domain	Req	Validation
Security Deposit	Security deposit paid for the equipment	Numeric	N	
Down Payment	Number of months of payment applied as a down payment for this transaction	Numeric	N	Integers 0, 1, 2, etc.
Down Payment Credit Card Number	Credit Card Number to be used for down payment.	Char 30	N	Number with no blanks or punctuation between the digits
Down Payment Credit Card Expiration Date	Credit Card Expiration Date	Char 10	N	Format: "mm/yyyy"
Residual	Residual value of the equipment	Numeric	N	

<extended-address>

This information packet is a parsed version of the <address> information packet. This is primarily used to support bureau lookups.

Field	Description	Domain	Req	Validation
Street Number	Address street number for consumer	Char 10	Y	
Predirectional	Street directional such as North, South, East, West, SE, NW, etc.	Char 5	N	Street Directional list
Street Name	Street name for the consumer	Char 30	Y	
Postdirectional	Street directional such as North, South, East, West, SE, NW, etc.	Char 5	N	Street Directional list
Street Type	Type of street for the consumer, e.g., Street, Road, Drive, etc.	Char 30	Y	Street Type list
Address 2	Second line of address. Apartment or Unit for consumer addresses	Char 30	N	
City		Char 30	Y	
State		Char 10	Y	State Abbreviation list
Zip/Postal Code	Postal or zip code for consumer	Char 10	Y	
Country	Country for the consumer	Char 30	Y	Country list
Phone		Char 13	Y	
Phone Extension		Char 13	N	

5 <information-request>

Field	Description	Domain	Req	Validation
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Information Type	Type of information that is being requested	Char 30	Y	Information Type list
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<lender-decision>

Field	Description	Domain	Req	Validation
Lender Id	eCredit.com assigned id for the lender	Char 60	Y	Valid lender Id
Lender Contact	Name of the lender contact	Char 30	N	
Lender Contact Phone	Phone number for the lender contact	Char 13	N	
Lender Contact Phone Extension		Char 13	N	
Lender Account Number	Lender assigned id for the customer	Char 30	N	
Lender Application Number	Lender assigned id for this credit application	Char 30	Y	
Status	eCredit.com-specific Status notification	Char 20	Y	Decision Status list
Decision	eCredit.com-specific Decision Code	Char 20	Y	Decision list
Decision State	eCredit.com-specific Decision State	Char 30	Y	Decision State list
Decision Code 1	Lender assigned code	Char 10	N	
Decision Code 2	Lender assigned code	Char 10	N	
Decision Code 3	Lender assigned code	Char 10	N	
Decision Code 4	Lender assigned code	Char 10	N	
Decision Code 5	Lender assigned code	Char 10	N	
Decision Reason 1	Lender assigned reason	Char 80	N	
Decision Reason 2	Lender assigned reason	Char 80	N	
Decision Reason 3	Lender assigned reason	Char 80	N	
Decision Reason 4	Lender assigned reason	Char 80	N	
Decision Reason 5	Lender assigned reason	Char 80	N	

Field	Description	Domain	Req	Validation
Disclaimer Text	The text of the disclaimer for this credit line	Char 2000	N	
Comment	Comments from the lender to the merchant or customer	Char 255	N	

<list-of-similars-choice>

Field	Description	Domain	Req	Validation
Bureau code	Code name for this bureau	Char 30	Y	Bureau list
Bureau number	Number from the bureau. This is the file number from Experian or the DUNS number from Dunn and Bradstreet	Char 30	N	
Company Name	Name of the company found	Char 30	N	
Company Address	Address of the company found	Char 30	N	
City		Char 30	N	
State		Char 30	N	
Accuracy	Accuracy rating	Numeric	N	

<lookup-application-criteria>

Field	Description	Domain	Req	Validation
Applicant Name	Name of the business customer of merchant	Char 30	Y	
Application Number	An unique id provided by the merchant for the application	Char 10	N	
Lender Application Number	An unique id provided by the lender for the application	Char 10	N	
Customer Number	An unique id for the customer	Char 10	N	
Lender Account Number	An unique id provided by the lender for the customer	Char 10	N	
Decision	eCredit.com-specific Decision Code	Char 20	N	Decision list
Decision State	eCredit.com-specific Decision State	Char 30	N	Decision State list
From	Application Decision status after this date-time	Char 20	N	Format: “yyyymmdd hh:mm”
To	Application Decision status before this date-time	Char 20	N	Format: “yyyymmdd hh:mm”

<lookup-business-criteria>

Information packet that specifies the criteria for looking up a business customer.

Field	Description	Domain	Req	Validation
Applicant Name	Name of the merchant's customer	Char 30	Y	
City		Char 30	N	
State/Province		Char 10	N	State Abbreviation list

<origination-info>

Information that describes the origination information for this application.

Field	Description	Domain	Req	Validation
Merchant Id	eCredit.com assigned id for the merchant	Char 10	Y	Valid merchant Id
Application Number	An unique id provided by the merchant for this application. If not provided, GFN will create a unique application number.	Char 10	N	
Channel Type	The type of sales channel (e.g. direct, web etc) where this application originated	Char 20	N	
Channel ID	The merchant-assigned identifier for the specific channel where this application originated	Char 20	N	
Location Id	The merchant-assigned identifier of the location (e.g. store or branch) where the application originated	Char 20	N	
Sales Rep Id	Merchant assigned id for the sales representative submitting this application.	Char 10	N	
Sales Rep Phone		Char 13	N	Sales Rep Phone
Sales Rep Phone Extension		Char 13	N	
Sales Rep Email	The email address for the Sales representative	Char 40	N	
Application Field 1	Application specific field for information passed from the merchant to the lender	Char 30	N	

Application Field 2	Application specific field for information passed from the merchant to the lender	Char 30	N	
Application Field 3	Application specific field for information passed from the merchant to the lender	Char 30	N	
Application Field 4	Application specific field for information passed from the merchant to the lender	Char 30	N	
Application Field 5	Application specific field for information passed from the merchant to the lender	Char 30	N	
Comment	Comments from the merchant or customer	Char 255	N	

<program-option>

Field	Description	Domain	Req	Validation
Program Option Id	Program option Id for this financing option.	Char 30	Y	Lender or Merchant-specific
Program Option Name	Program option name for this financing option	Char 30	Y	Examples: Tech Refresh
Term	Lease or loan term for this application, in months	Numeric	N	
Payment	Payment for this lease or loan	Numeric	N	Aggregate lease or loan payment for the transaction
Rate Factor	Rate factor for this lease or loan	Numeric	N	Expressed as a decimal. 0.03 is 3%
Annual Percentage Rate	The APR for this lease or loan	Numeric	N	Expressed as a percentage. 20 is 20%.
Purchase Option	The purchase option for the equipment	Char 20	N	Examples: FMV: Fair Market Value, 10% Buyout, \$1 Buyout
Residual	Residual for the equipment	Numeric	N	
Down Payment	Number of months of payment applied as a down payment for this transaction approved	Numeric	N	Integers 0, 1, 2, etc.

<support-data>

Field Name	Description	Domain	Req	Validation
Support Data Attribute	The name for this support data attribute	Char 50	Y	

Support Data Value	The value of the support data	Char 255	Y	
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<support-data-reference>

Field Name	Description	Domain	Req	Validation
Support Data Source	The source of the support data.	Char 50	Y	
Support Data Event Id	The Id of the event that sourced the data	Char 30	Y	

<user-login>

Field Name	Description	Domain	Req	Validation
Login-id	The user's login identifier	Char 20	Y	
Password	The password for this account	Char 20	Y	
Private Key File	The name of the password file generated along with the certificate	Char 50	N	
Certificate File	The name of the Certificate file generated by eCredit.com to uniquely identify the merchant	Char 50	N	

What is claimed is: